



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/481,903	01/12/2000	BENSON CHAN	EN999025	6309

7590

04/10/2002

MARK LEVY
SALZMAN & LEVY
19 CHENANGO ST
SUITE 606
BINGHAMTON, NY 13901

EXAMINER

KANG, JULIANA K

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 04/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/481,903

Applicant(s)

CHAN ET AL.

Examiner

Juliana K. Kang

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-24 and 27-32 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

1. This is a response to the amendment filed on January 16, 2002 has been carefully studied by the Examiner. The amendment communication filed on January 16, 2002 requested to enter the affidavit swearing back of the ICHINO et al reference, which was being submitted under separate cover. However, the affidavit was not received by the Office. The phone call was made to get an official fax copy of the affidavit on April 4, 2002 and during the phone call, the examiner indicated that the claims would be allowable, but upon further search, however, and the consequent discovery of a previously uncited prior art document, a new rejection is applied to the pending claims. The late discovery of the newly applied reference is sincerely regretted. Further, the Examiner made a type graphical error during the restriction which was paper number 5. The Group I supposed to include claims 1-24 and 27-30, not 1-14 and 27-30. During the Office Action (paper number 7), all the claims of Group I, which are 1-24 and 27-30, are examined. Because of the typo during the restriction, applicant thinks that claims 15-24, which was part of Group I, are withdrawn. Unless applicant intentionally delete those claims during next response, these claims are still considered as part of Group I, elected invention. This action is **not** made final.

2. The affidavit received by the Office as a faxed copy on April 4, 2002 under 37 CFR 1.131 has been considered but is ineffective to overcome the Ichino et al reference because of lack in evidence.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the host card recited in claims 1-16, 17, and 27-30 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 3, 6, 8, 9, 11, 12, 15, 16, 18, 19, and 24 are objected to because of the following informalities:

✓ Regarding claim 3, there are no structural correlation between the optical subassembly and optoelectronic die.

✓ Regarding claim 6, claim 6 recites the limitation "an optical cable" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

✓ Regarding claim 8, claim 8 recites the limitation "an optical cable" in line 12. There is insufficient antecedent basis for this limitation in the claim.

✓ Regarding claim 9, claim 9 recites the limitation "a fiber optic cable" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 2874

Regarding claim 11, the recited limitation "at least one faraday barrier shield, said overmold frame housing" makes the claim unclear. Should it be --at least one faraday barrier in said overmold frame housing--?

Regarding claim 12, claim 12 recites the limitation "said at least one fiber optic" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 15, claim 15 recites the limitation "said at least one fiber optic cable" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 16, the recited phrase in lines 11-12, "an overmold frame that is supported by said laminate, a heatsink carrier with optoelectronic die," does not make sense. It appears that the phrase "a heatsink carrier with optoelectronic die" should not be recited there.

Regarding claim 18, claim 18 recites the limitation "said at least one optoelectronic die" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 19, claim 19 recites the limitation "said at least one optoelectronic die" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 24, recited limitation, "said electrical signal transfer device electronically couples an electronic signal from said laminate" does not seem to be correct. Should it be --said electrical signal transfer device electronically couples an electronic signal from said electronic subassembly--, since the laminate does not

Art Unit: 2874

produce electronic signal? Note that the electrical signal transfer device ("flexible circuit") is just lying on the laminate. Appropriate corrections are required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1-9, 12, 14-17, 19, and 20-31 are rejected under 35 U.S.C. 102(a) as being anticipated by Giboney et al (U.S. Patent 6,318,909 B1).

Regarding claims 1 and 27, Giboney et al disclose a package article (20) for removably accepting (64 see column 6 lines 15-16) a fiber optic cable (71), said package article (20) operatively connected to a host card (47), comprising; a laminate (29) for supporting optoelectronic components (see Fig. 9); an amplifier die (36, see column 8 lines 25-29) operatively connected to and supported by said laminate (29) for amplifying electrical signals; a flexible circuit (25) electrically connected to and supported by said laminate for receiving said amplified electrical signals from said amplifier die (36); and an optoelectronic die (32) electrically connected to said flexible circuit (25) for receiving said amplified electrical signals generated by said amplifier die and for generating optical signals responsive thereto.

Regarding claims 2, 28 and 29, Giboney et al further disclose a heatsink carrier (22) operatively connected to the flexible circuit (25), and attached to the optoelectronic die (32) for removing heat therefrom.

Regarding claim 3, Giboney et al disclose an optical subassembly comprising an optical coupler (52) and a removable optical connector (64) having optical cable (71).

Regarding claim 4, Giboney et al disclose an optoelectronic subassembly for accepting optical signals from a fiber optic cable (71), said optoelectronic subassembly being operatively connected to a host card (47), said optoelectronic subassembly comprising: an optoelectronic die (32) for receiving electrical signals and for generating optical signals responsive thereto; a flexible circuit (25) electrically connected to said optoelectronic die (32); an optical coupler (52) optically connected to said optoelectronic die (32) for receiving optical signals therefrom; and a heatsink carrier (22) operatively connected to said flexible circuit (25), and attached to said optoelectronic die (32) for removing heat therefrom.

Regarding claim 5, Giboney et al further disclose an optical connector (64) removably connected to and in optical communication with said optical coupler (52); and a retainer (55, see column 12 lines 25-35) operatively connected to said optical coupler and removably connected to said optical connector for aligning said optical coupler and optical connector.

Regarding claim 6, optical connector (64) further comprises an optical cable (71).

Regarding claims 7 and 27, Giboney et al disclose a package article (20) for removably accepting a fiber optic cable (71), said package article (20) operatively

connected to a host card (47), said package article comprising: a flexible circuit (25) for receiving electrical signals; an optoelectronic die (32) operatively connected to said flexible circuit (25) for receiving said electrical signal and for generating optical signals responsive thereto; and a heatsink carrier (22) operatively connected to said flexible circuit (25), and attached to said optoelectronic die (32) for removing heat therefrom (see column 5 lines 5-11).

Regarding claims 8 and 30, Giboney et al further disclose a laminate (29) for supporting optoelectronic components (32); an amplifier die (36) operatively connected to and supported by said laminate (29) for amplifying electrical signals; an optical subassembly (64, 52) in optical communication with said optoelectronic die, for receiving and processing said optical signals therefrom, said optical subassembly comprising, an optical coupler (52) and removable optical connector (64) having an optical cable (71); and a retainer (55) operatively connected to said optical coupler and removably connected to said optical connector for aligning said optical coupler and optical connector.

Regarding claims 9, 14, 16, and 21, Giboney et al disclose all the claimed limitation including an overmold frame 81 having a cavity 93 (see Fig. 6B).

Regarding claim 20, Giboney et al disclose the retainer (55) being attached to the heatsink carrier (29).

Regarding claims 12, 15, 19 and 22, Giboney et al disclose a fiber optic coupling (52) disposed between the optoelectronic die (32) and the fiber cable (71).

Regarding claim 17, Giboney et al disclose a host card (47).

Regarding claim 23, Giboney et al disclose a transmitting optoelectric subassembly for accepting a parallel fiber optic connector that is secured to one end of a parallel fiber optic cable, comprising; an optoelectronic subassembly comprising a transmitting optoelectronic device (32) secured to a carrier (32), an electrical signal transfer device, and an optical coupler signal transfer device secured to a retainer (55) and to said carrier; and an electronic subassembly (see Fig. 9) comprising an overmold frame (81) secured to a laminate(29) and to said retainer (55).

Regarding claim 24, Giboney et al disclose the retainer removably retains the parallel fiber optic connector (see column 18 lines 35-40).

Regarding claim 31, as described above, Giboney et al disclose all the claimed invention. Please note that recitation of a coupling device for coupling a multiple channel fiber optic cable to a multiple channel VCSEL transmitter and a multiple channel PAID receiver has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Giboney et al.

Regarding claim 10, as described above, Giboney et al disclose all the claimed limitations except an adhesive for attaching the optical elements. It is well known in the art to use an adhesive to attach optical elements, thus, it would have been obvious to one with ordinary skill in the art to use an adhesive in Giboney et al invention as means for attaching the optical elements.

Claim 11, 18 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichino et al as applied to claims 9 and 16 above, and further in view of Henningsson et al (U.S. Patent 6,072,613).

As described above, Ichino et al teach disclose invention except the faraday barrier shield. Henningsson et al teach an opto-electronic transceiver module with a faraday barrier for shielding the transmitter side from the receiver side. It would have been obvious to one with ordinary skill in the art to apply Henningsson et al's teaching of faraday barrier in Ichino et al to provide RF shielding for optoelectronic component.

Allowable Subject Matter

8. Claims 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter. The claims are allowable over the prior art of record including the closet prior art, Ichino et al, because none the Ichino et al reference either alone or in combination disclose or render obvious claimed device including a retainer that is snap connected and attached to the heatsink carrier that is enclosed and secured in a cavity of the overmold frame.

Conclusion

10. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (703) 305-6259. The examiner can normally be reached on Mondays and Thursday 7:00-4:30.

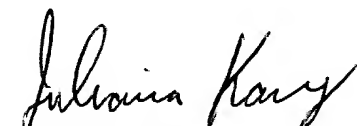
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (703) 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

Application/Control Number: 09/481,903
Art Unit: 2874

Page 11

308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3072.


Juliana Kang
April 8, 2002

